

5 WHAT IS CLAIMED IS:

1. A composition comprising unsaturated fatty acid solutions of one or more poly alpha (hydroxy)aliphatic acids, and / or their interaction product(s) and less than 10 weight % of one or more multifunctional (meth)acrylate esters, vinyl ethers, or combinations thereof.
- 10 2. The composition of claim 1, further comprising 0.4 to 4 weight % of one or more organic zirconium(4) compounds.
3. The composition of claim 1, further comprising one or more inorganic salts of
15 peracids.
4. The composition of claim 1, further comprising 0.4 to 4 weight % of one or more organic zirconium(4) compounds, and one or more inorganic salts of peracids.
- 20 5. The composition of claim 1 comprising 2 to 15 weight percent of drying oil derived fatty acid solutions of 10-35 wt % of poly alpha (hydroxy)aliphatic acid(s), and/or their interaction product(s), 0.4 to 4 weight % of one or more organic zirconium(4) compounds, 1 to 7 weight % of one or more multifunctional (meth)acrylate esters, vinyl ethers, or combinations thereof, and catalytic proportions of one or more
25 inorganic salts of peracids.
6. The composition of claim 1, further comprising catalytic proportions of organic (hydro)peroxides.
- 30 7. A method of printing comprising using an ink comprising the composition of claim 1.
8. The method of claim 7, wherein the printing comprises applying the ink to a press.

- 5 9. The method of claim 7, wherein the printing is lithographic printing.
10. The method of claim 7, wherein the printing comprises printing on paper.
11. A method of printing comprising using an ink vehicle or varnish comprising the
10 composition of claim 1.
12. The method of claim 11, wherein the ink vehicle or varnish is mixed with a fountain
solution.
- 15 13. A printing ink or printing ink varnish comprising the composition of claim 1 and one
or more organic zirconium(4) compounds.
14. The printing ink or printing ink varnish of claim 13, wherein the organic zirconium(4)
compounds comprise 0.4 to 4 weight % of the total solution.
- 20 15. A method of printing comprising mixing the printing ink or printing ink varnish of
claim 13 with a fountain solution.
16. The method of claim 15, wherein the ink vehicle or varnish comprises 2 to 15 weight
25 percent of drying oil derived fatty acid solutions of 10-35 wt % of poly alpha
(hydroxy)aliphatic acid(s).
17. The method of claim 16, wherein the ink vehicle or varnish further comprises 1 to 7
weight % of one or more multifunctional (meth)acrylates, and / or vinyl esters.
- 30 18. The method of claim 16, wherein the fountain solution further comprises an organic
(hydro)peroxides or an inorganic salt of a peracid.

- 5 19. The method of claim 15, wherein the ink vehicle or varnish comprises solids, alkyds, polyesters or polyamides.
20. The composition of claim 1, further comprising one or more additional ink vehicle or varnish components.
- 10 21. The composition of claim 20, wherein the additional ink vehicle or varnish components are solids, alkyds, polyesters or polyamides.
22. The composition of claim 2, wherein the organozirconium compound is any of
- 15 zirconium(4) tetrakis octanolato, adduct 2 moles of (bis tridecyl) phosphite; zirconium(4) tetrakis i-decanolato, adduct 2 moles of (tris lauryl) phosphite; oxo zirconium(4) bis i-pentadecanoate; zirconium(4) 2-propanolato, tris (bis butyl)phosphato-O; zirconium(4) neodecanolato, tris (phenyl) sulfonato-O;
- 20 zirconium(4) t-butanolato, tris (ethyl, benzyl) phosphito; zirconium(4) bis iso-hexanolato, cyclo (bis allyl) diphosphato-O,O; ethylenediolato zirconium(4) cyclo (bis allyl) diphosphato-O,O; 1,3-propylendiolato zirconium(4) linolenate, myristate; or Bis 1,4-butene-2 diolato zirconium(4) adduct 1 mole of tris (bis oleyl)
- 25 phosphite.
23. The fountain solution of claim 13, wherein the organozirconium compound is any of:
- 30 zirconium(4) tetrakis octanolato, adduct 2 moles of (bis tridecyl) phosphite; zirconium(4) tetrakis i-decanolato, adduct 2 moles of (tris lauryl) phosphite; oxo zirconium(4) bis i-pentadecanoate; zirconium(4) 2-propanolato, tris (bis butyl)phosphato-O; zirconium(4) neodecanolato, tris (phenyl) sulfonato-O;

5 zirconium(4) t-butanolato, tris (ethyl, benzyl) phosphito;
zirconium(4) bis iso-hexanolato, cyclo (bis allyl) diphosphato-O,O;
ethylenediolato zirconium(4) cyclo (bis allyl) diphosphato-O,O;
1,3-propylendiolato zirconium(4) linolenate, myristate; or
Bis 1,4-butene-2 diolato zirconium(4) adduct 1 mole of tris (bis oleyl)
10 phosphite.

24. The method of claim 7, wherein the organozirconium compound is any of;
zirconium(4) tetrakis octanolato, adduct 2 moles of (bis tridecyl) phosphite;
zirconium(4) tetrakis i-decanolato, adduct 2 moles of (tris lauryl) phosphite;
15 oxo zirconium(4) bis i-pentadecanoate;
zirconium(4) 2-propanolato, tris (bis butyl)phosphato-O;
zirconium(4) neodecanolato, tris (phenyl) sulfonato-O;
zirconium(4) t-butanolato, tris (ethyl, benzyl) phosphito;
zirconium(4) bis iso-hexanolato, cyclo (bis allyl) diphosphato-O,O;
20 ethylenediolato zirconium(4) cyclo (bis allyl) diphosphato-O,O;
1,3-propylendiolato zirconium(4) linolenate, myristate; or
Bis 1,4-butene-2 diolato zirconium(4) adduct 1 mole of tris (bis oleyl) phosphite.

25. The method of claim 15, wherein the organozirconium compound is any of:
25 zirconium(4) tetrakis octanolato, adduct 2 moles of (bis tridecyl) phosphite;
zirconium(4) tetrakis i-decanolato, adduct 2 moles of (tris lauryl) phosphite;
oxo zirconium(4) bis i-pentadecanoate;
zirconium(4) 2-propanolato, tris (bis butyl)phosphato-O;
zirconium(4) neodecanolato, tris (phenyl) sulfonato-O;
30 zirconium(4) t-butanolato, tris (ethyl, benzyl) phosphito;
zirconium(4) bis iso-hexanolato, cyclo (bis allyl) diphosphato-O,O;
ethylenediolato zirconium(4) cyclo (bis allyl) diphosphato-O,O;
1,3-propylendiolato zirconium(4) linolenate, myristate; or

5 Bis 1,4-butene-2 diolato zirconium(4) adduct 1 mole of tris (bis oleyl) phosphite.

26. The composition of claim 1, wherein the poly alpha (hydroxy)aliphatic acid(s) is any of:

hydroxy acetic acid;

10 2- hydroxy propionic acid;

2-hydroxy-2-methyl 3-butenic acid,;

2 hydroxy butyric acid;

2-hydroxy-6-caprolactone;

ethyl 2 hydroxy propanoate;

15 methyl 2-hydroxy (2-methyl)-3-butenate;

hydroxy acetic acid, 3-hydroxy i-pentanoic acid;

2-hydroxy-3-methoxy-isobutyric acid; or

2 hydroxy-4-butyrolactone, 2-hydroxy propionic acid, 2-hydroxy 4-pentenoic acid.

20 27. The composition of claim 1, wherein the multifunctional (meth)acrylate ester is any of:

Tris methylol propane tris acrylate;

pentaerythritol trimethacrylate;

sorbitol tetrakis acrylate;

25 tetrakis 1,2-propylene glycol acrylate, methacrylate;

terphthalic acid bis 2-methacrylateoethyl ester;

ethoxylated(3) bisphenol A dimetacrylate;

acrylate terminated polybutadiene(12);

Bis trimethylol propane bis acrylate, bis allyl ether;

30 zinc bis methacrylate; or

60% castor oil tris acrylate, 40% 1,4-cyclohexane bis methacrylate.

- 5 28. A composition made by the process of combining 2 to 15 weight percent of drying
oil derived fatty acid solutions of 10-35 wt % of poly alpha (hydroxy)aliphatic
acid(s), 0.4 to 4 weight % of one or more organic zirconium(4) compounds, 1 to 7
weight % of one or more multifunctional (meth)acrylate esters, and catalytic
proportions of one or more inorganic salts of peracids.

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29. The composition of claim 27, further comprising combining water.